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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/833,639 | 04/13/2001 | Serguei Zhdanok | 000348-263 | 3068 |

7590 02/19/2004

E. Joseph Gess
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

LANGEL, WAYNE A

| ART UNIT | PAPER NUMBER |
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1754

DATE MAILED: 02/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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| EXAMINER |
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DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 1-16-04

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire _____ month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-21 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-3, 5-9 and 11-21 is/are rejected.

☒ Claim(s) 4 and 10 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d):

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of Reference Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

-- SEE OFFICE ACTION ON THE FOLLOWING PAGES --

Art Unit 1754

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Tonkovich et al., for the reasons given in the last Office action. Applicant's argument, that Tonkovich et al. disclose that a significant advantage of its process is the reduced pressure drop obtained by the reactant flow passing and contacting the porous structure, but not being required to flow through the porous structure, is not convincing, since such disclosure of Tonkovich et al. would constitute a negative teaching as to the entire flow of the reaction gas mixture being introduced into the porous medium. It is well-settled that negative teachings nevertheless constitute teachings upon which a prima facie case of obviousness may be based. It would be prima facie obvious to introduce the entire flow of the reaction gas mixture into the porous medium in the process of Tonkovich et al. with the expected result that the pressure drop would not be

reduced. Moreover, Tonkovich et al. teach at column 2, lines 54-57 that sufficient reaction still occurs because of the net flows through molecular diffusion into and out of the porous structure. Such disclosure would suggest that more reaction would occur if the entire flow of the reaction gas mixture would be introduced into the porous medium. Accordingly one of ordinary skill in the art would be motivated to pass the entire flow of the reaction gas mixture into the porous medium in the process of Tonkovich et al., in order to achieve greater reaction.

Claims 1-3, 5-9, 11-19 and 21 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no "description support" in the original specification for the step of alternately feeding a reactor containing the porous medium with the reaction gas mixture by introduction modes (i) and (ii), when not employing a first inert porous material, a catalytic bed and then a second inert porous material, wherein the reaction gas mixture or a product thereof successively encounters the first inert porous material, the catalytic bed and the second inert

porous material within a vertical cylindrical reactor, the ends of which are filled with one or other of the inert porous materials and the central part of which is filled with the catalytic bed, as recited in original claims 4 and 10.

Claims 4 and 10 are objected to as based on rejected parent claims, and would be allowed if written in independent form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne A. Langel whose telephone number is (571) 272-1353. The examiner can normally be reached on Monday through Friday from 8 A.M. to 3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (571) 272-1358. The fax phone number for this Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free).

WAL:cdc
February 17, 2004

Wayne A. Langel
WAYNE A. LANGEL
PRIMARY EXAMINER